

REMARKS

Following entry of the present Amendment, claims 17-63 are now all the claims pending in the application.

The Examiner rejects claims 17-51 under 35 U.S.C. § 103(a) as being unpatentable over Otani in view of Hashimito. Also, the Examiner objects to claims 26, 28-30, 42 and 44-46 due to informalities.

With regard the Examiner's claim objections, Applicant amends claims 26, 28-30, 42 and 44-46 to avoid the use of the alternative language, and adds new claims 52-63 to preserve the scope of coverage afforded by the original claims 26, 28-30, 42 and 44-46, accordingly. No new issues requiring further search have been introduced by these amendments, and the Examiner is respectfully requested to approve entry thereof.

With regard to the Examiner's prior art rejection, Applicant respectfully traverses this rejection as follows.

As explained in Applicant's previous Amendment filed August 1, 2003, an embodiment of Applicant's invention as claimed in independent claim 17 is directed to an optical component that has "at least six stacked layers," and that only two different materials (Al_2O_3 and MgF_2), one having a high refractive index and one having a low diffractive index, are used. The first layer (nearest to the substrate) is specified as high refractive aluminum oxide (thus being "substantially" free of magnesium fluoride). A further limitation regards the second layer, which may not exceed a certain layer thickness limit (optical thickness $\leq 0.33 \lambda$). Further, none of the layers is geometrically thicker than about 0.5λ .

On the other hand, an embodiment of Applicant's invention as claimed in independent claim 34 is directed to an optical component that has "multiple stacked layers," the second and third layers meeting specific criteria in optical thickness. Further, an embodiment of Applicant's invention as claimed in independent claim 50 is directed to an optical component that has "at least six stacked layers" that alternate between Al_2O_3 and MgF_2 and each meet specific criteria in optical thickness.

With regard to Applicant's independent claims 17 and 50, the Examiner acknowledges that Otani (the Examiner's primary reference) "lacks reference to the second layer having a thickness of less than 0.33λ " (see Office Action, page 3, lines 10 and 11). Hashimoto, which the Examiner cites for the alleged teaching of magnesium fluoride being a commonly known low refractive material for use in place of silicon dioxide (see Office Action, page 3, lines 18-22), does not supply this acknowledged deficiency of Otani. Thus, the Examiner's alleged *prima facie* case of obviousness is based on the following conclusion (which amounts to the Examiner taking an official notice as to the common knowledge in the art of optical coating prior to the time of Applicant's invention):

It is extremely well known in the art that one may change the ordering of the low refractive layers in a high-low alternating refractive index optical filter without altering the functionality of the optical filter. Therefore one of ordinary skill in the art would recognize that the second layer of Otani could have the optical thickness of any of the low refractive layers without altering the function of the optical filter. One would have been motivated to decrease the optical thickness of the second layer for the purpose of increasing the amount of light transmitted by the filter by limiting the amount of material the light might pass through within the filter. (Office Action, page 3, lines 11-18; *see also Id.*, page 4, lines 11-18, page 4, line 20 through page 5, line 5, and page 5, lines 7-14.)

With regard to Applicant's independent claim 34, as noted above, the Examiner acknowledges that Otani (the Examiner's primary reference) "lacks reference to the second layer having a thickness of less than 0.33λ " as claimed in claims 1 and 50 (*see* Office Action, page 3, lines 10 and 11). However, the Examiner does not explicitly acknowledge that Otani fails to disclose a "second layer ... having an optical thickness equal to or less than (0.1λ) ", as claimed in Applicant's independent claim 34. Instead, the Examiner applies the same reasoning (reproduced above) as applied to claims 1 and 50 (*see* Office Action, page 7, lines 5-19).

Applicant respectfully submits that the Examiner's conclusion, and its application to the requirements set forth in Applicant's claims 1-51, finds no basis in either the cited prior art, or the general knowledge of artisans skilled in the art of optical coating. In fact, the Examiner's position is contrary to the general understanding of skilled artisans in the art of optical coating, where it is well recognized that optical properties of optical coatings are critically influenced by the sequence of layers and by the respective optical layer thickness within the sequence. Nowhere does Otani or Hashimoto disclose or suggest that the properties of the layers in an optical coating are somehow interchangeable. Thus, the Examiner is respectfully requested to provide evidence to support the conclusory statements as to the alleged common knowledge in the art of optical coating. In this regard, the Examiner is directed to MPEP 2144.03 which states, *inter alia*, "[i]t is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based" (MPEP 2144.03(E)).

Furthermore, in as much as the Examiner alleges that "the second layer of Otani could have the optical thickness of any of the low refractive layers" (*see* Office Action, page 3,

emphasis added), the Examiner puts forth either an “inherency” argument or an argument to demonstrate technical feasibility. Neither argument is correct or persuasive. MPEP §2112 clearly states that “the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic,” *citing In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993)). The MPEP also states at §2143 that the “fact that references can be . . . modified is not sufficient to establish *prima facie* obviousness” (emphasis added). Similarly, the same MPEP section emphasizes that the “fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness.” *Id.*

Therefore, even if the assertion that the second layer of Otani could have the optical thickness of any of the low refractive layers, it would not prove the claimed invention to be obvious.

As acknowledged by the Examiner, the second layer of Otani is in fact disclosed as not having the optical thickness of any of the low refractive layers. Therefore, the assertion that Otani could have the optical thickness of any of the low refractive layers is based on hypotheticals, and not on the actual record presented. The ground of rejection are therefore erroneous as a matter of law, and are fatally defective.

In summary, the Examiner has failed to formulate a *prima facie* case of obviousness in that the Examiner failed to presented any factual basis to support the alleged “common knowledge” which forms the primary basis of the Examiner’s rejection.

Accordingly, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner


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feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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